

TEAM NORFOLK



Winter Storm 2015

February 15 - 19

&

February 24 - 27

After Action Report

DRAFT - 4/20/15

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SUMMARY

Norfolk experienced two separate and significant winter weather events in February 2015. The first, during the week of President’s Day (February 16) produced a wet, frozen precipitation and up to 3.6” observed inches of snow and long-lasting frigid temperatures. The second, occurring the following week (February 25-27) which resulted in up to 6” of fluffier snow and warmer temperatures.

Governor McAuliffe declared a State of Emergency for the Commonwealth on Monday, February 16th at 3pm. Such a declaration serves to make available state resources to assist with efforts to prepare to and respond to the hazardous conditions. During the second winter weather incident, Norfolk City Manager Marcus Jones also declared a local emergency, retroactive to coincide with the Governor’s. This was done to meet the conditions for any potential federal assistance or reimbursement. Unfortunately both weather occurrences combined did not meet the criteria for such assistance.

For the incident occurring during the week of President’s Day, based on the below Hourly Graph produced by the National Weather Service, the bulk of the snow precipitation was forecasted to occur during the overnight hours of Monday night (the 16th) and Tuesday morning. In addition, sleet combined with the snow resulting in a heavy layer of ice on top of the snow. While freezing temperatures are shown in this forecast graphic, the frigid temperatures with wind chills dipping to -8 at one point, lasted days thus hampering all efforts – natural and equipment – to break up and remove the snow and ice.

As mentioned, the second winter weather event produced a different type of snow under different environmental conditions, including warmer temperatures – all which collectively served well to facilitate the melting and removal of snow in a speedier fashion.

This report was reviewed by Team Norfolk during its April 15, 2015 meeting.

COMMAND AND CONTROL

Team Norfolk has been in existence since 2012. The concept of establishing a whole community approach to mitigation, preparedness, response and recovery has proven effective for all types of incidents, including winter weather. These snow events are no exception, and in the same way a planning, training and exercising, these events improved the coordination and strengthen the relationships between the organizations which make up Team Norfolk. In this instance, the agencies include:

<i>1-111th Field Artillery Battalion</i>	<i>Norfolk Courts</i>	<i>Norfolk Public Relations</i>
<i>Bon Secours DePaul Medical</i>	<i>Norfolk CSB</i>	<i>Norfolk Public Utilities</i>
<i>CHKD</i>	<i>Norfolk Emergency Management</i>	<i>Norfolk Public Works</i>
<i>Cox Communication</i>	<i>Norfolk Fire-Rescue</i>	<i>Norfolk Recreation, Parks and</i>
<i>Dominion Virginia Power</i>	<i>Norfolk General Services</i>	<i>open Space (RPOS)</i>
<i>Endependence Center</i>	<i>Norfolk Homelessness</i>	<i>NRHA</i>
<i>EVMS</i>	<i>Norfolk Human Services</i>	<i>Norfolk Public Schools</i>
<i>Hampton Roads Transit</i>	<i>Norfolk IMPACT Cares</i>	<i>Norfolk Risk Management</i>
<i>Navy Region Mid-Atlantic</i>	<i>Norfolk Neighborhood Dev.</i>	<i>Norfolk Sentara Leigh</i>
<i>Naval Station Norfolk</i>	<i>Norfolk NEST</i>	<i>Norfolk Sheriff's Office</i>
<i>Norfolk 911</i>	<i>Norfolk Police</i>	<i>Norfolk State University</i>
<i>Norfolk Airport Authority</i>	<i>Norfolk Public Health</i>	<i>Old Dominion University</i>
<i>Norfolk ComTech</i>		<i>Operation Blessing</i>

COORDINATION AND COMMUNICATION

Coordination and information sharing took place by deploying a virtual Emergency Operations Center (EOC) activation. Building on a success / lesson learned from the 2013 winter storms, rather than corralling agencies to physically report to and work out of the Norfolk EOC, situation updates, incident goals and objectives and agency report outs occurred via multiple conference calls, email as well as Norfolk's WebEOC program. List of conference calls and email updates are as follows:

<i>Sunday, February 15 at 6:30pm – Conference Call</i>	<i>Wednesday, February 18 at 1pm – Conference Call</i>
<i>Monday, February 16 at 1:00pm – Conference Call</i>	<i>Email update sent at 2:49pm</i>
<i>Monday February 16 at 7:00pm – Conference Call</i>	<i>Email update sent at 5:09pm</i>
<i>Tuesday, February 17 at 9:30am – Conference Call</i>	<i>Thursday, February 19</i>
<i>Tuesday, February 17 at 3pm – Conference Call</i>	<i>Email update sent at 2:51pm</i>
<i>Email update sent at 3:56pm</i>	<i>Email update sent at 3:56pm</i>

Tuesday, February 24

Email update sent at 10:15am

Email update sent at 4:34pm

Email update sent at 8:12pm

Email update sent at 9:09pm

Wednesday, February 25 at 11am – Conference Call

Email update sent at 9:27am

Email update sent at 12:14pm

Email update sent at 3:24pm

Thursday, February 26 at 1pm – Conference Call

Email update sent at 8:26am

Email update sent at 9:04am

Email update sent at 2:14pm

Email update sent at 8:24pm

Friday, February 27 at 1pm – Conference Call

Email update sent at 9:34am

Note: Many Team Norfolk conference calls were followed by a another conference discussion among the Policy Cell involving the Deputy City Managers (DCM), Public Relations (PR) and Human Resources (HR). These follow on discussions were quite valuable.

POLICY CELL

Wynter Benda, DCM

Peter Chapman, DCM

Sabrina Joy-Hogg, DCM

Ron Williams, DCM

Lori Crouch, PR

Capri Stanley, HS

Jim Redick, Emergency Manager



Marcus Jones, City Manager

Strengths / Successes: Roles, responsibilities and expectations were discussed early and often, based on the Team Norfolk Winter Weather Annex – updated with lessons learned from the 2014 winter storms.

Strengths / Successes: Decisions, based on available information and the safety of Norfolk staff, students and the community, were made at the earliest opportunity Likewise, every effort was made to communicate decision and announcements to staff, partners and the community as early as possible to allow them time to plan accordingly.

- ✓ **Area of Improvement:** A list of the core Emergency Operations Center partners should be established in both Microsoft Outlook as well as Nixle. Likewise, responsibility for these core agencies to participate on Team Norfolk conference calls / EOC briefings should be indicated in the Emergency Operations and Resilience Framework Basic Plan.

- ✓ **Area of Improvement:** An opportunity was lost in that Army National Guard assets were available to assist as part of the Governor's emergency declaration. Outreach to the Army Guard should have been made at the onset of the incident, and therefore, the Commanding Officer for the 1/111th Army National Guard should be included on the EOC Core list.
- ✓ **Area of Improvement:** Include Norfolk Cultural Facilities, Arts and Entertainment as well as FestEvents to list to resolve potential conflicts in messaging.



Denotes these items were completed at the time of this writing.

Area of Improvement: To ensure callers know they are connected, music should be played leading up to the start of the briefing. This will eliminate the need to repeatedly announce the call will begin shortly.

Area of Improvement: Visuals are critical during EOC briefings and conference calls. Instead of relying solely on email attachments, Norfolk EOC should utilize the Adobe Connect feature within the Homeland Security Information Network (HSIN) for every briefing / conference call to share desktop images with those calling in, as well as forecast information, and slides driving the briefing.

Area of Improvement: While the number of folks who can be on a given EOC briefing call is limited to the EOC Core group, decisions made during that call, and the subsequent Policy Cell discussion should be sent to all of Team Norfolk Emergency Operations via Nixle and posted in WebEOC.

Area of Improvement: One critical infrastructure partner with operations in multiple localities in the region asked how they could receive similar situation awareness and coordination outside of Norfolk. Norfolk EOC agreed to facilitate this discussion with other localities and otherwise invite those EOC's / Emergency Managers to participate in our EOC briefings.

SITUATION AWARENESS



The National Weather Service in Wakefield is a valuable partner who provides incredible tools for shared situational awareness. Those tools are not only available to Emergency Operations Centers, but open to all of Team Norfolk and the entire Norfolk community online. Those tools which are most often relied upon are included in the Team Norfolk Winter Weather Annex and also listed below:

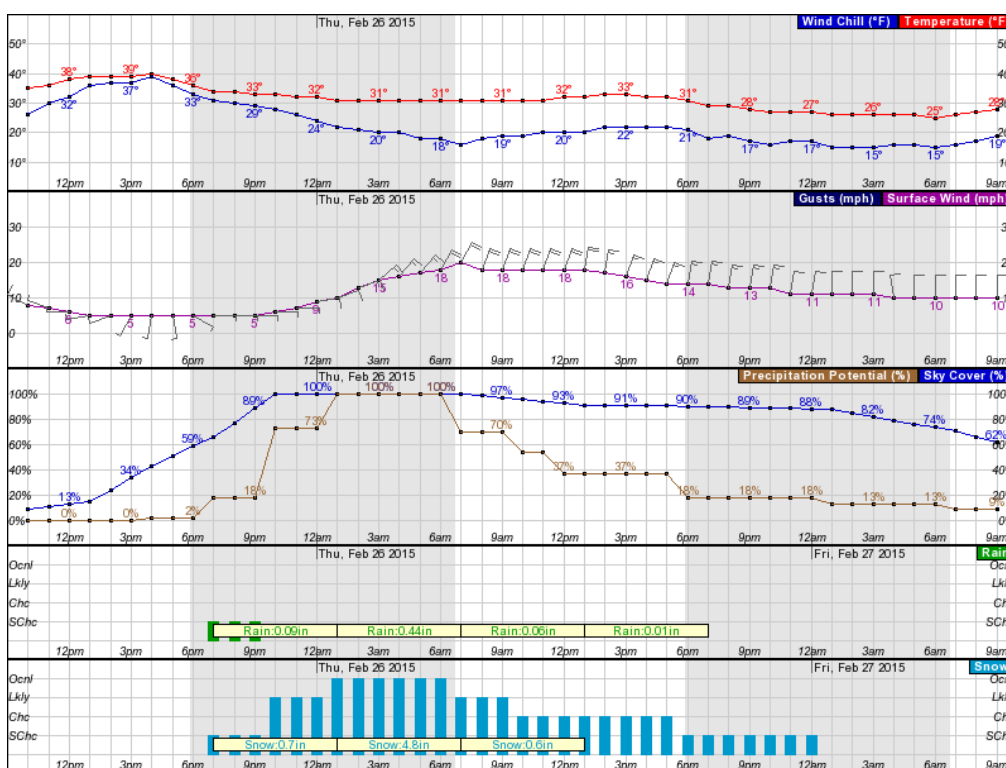
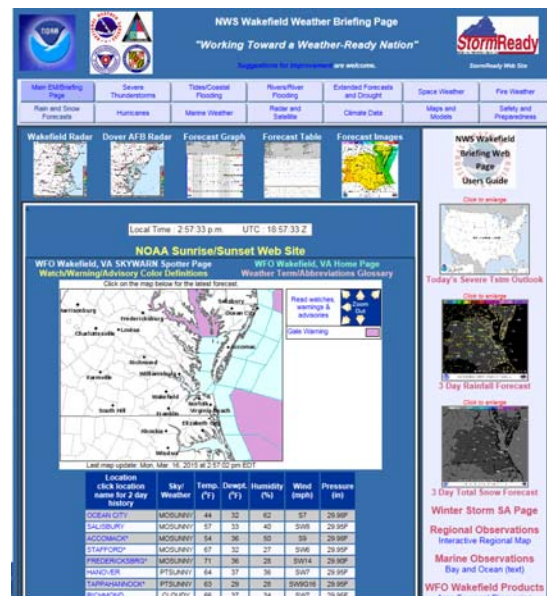
Norfolk City Situational Awareness Display
http://www.erh.noaa.gov/er/akq/SAD/SAD_Norfolk.html

NWS Emergency Management Briefing Page:
<http://www.erh.noaa.gov/er/akq/empage.php>

NWS Winter Weather Forecasts
http://www.wpc.ncep.noaa.gov/wwd/winter_wx.shtml

NWS Winter Storm Briefing Page:
<http://www.erh.noaa.gov/er/akq/brief/Winter.php>

NWS Hourly Forecast:
<http://forecast.weather.gov/gridpoint.php?site=akq&TypeDefault=graphical>



NWS Rain / Snow Forecast page:
<http://www.erh.noaa.gov/er/akq/brief/rainsnow.php>

➡ To find accumulation amounts as well as links to forecasts. Simply move the cursor over the various forecast options and the map should change to reflect that information.

For observed precipitation levels, click on NWS Multi-Sensor Daily Precipitation Analysis Page (or [click here](#)). When you scroll down, you can select observations for the current day and longer. Further, if you select Virginia and the last 7 days, you have the option to not only see observed, but what is normal, the departure from normal, etc.

For frequency of precipitation events of certain magnitudes, click on the NOAA/NWS Precipitation Frequency Analysis Website (or [click here](#)). Click and drag the red + to Norfolk, then scroll down below the map where you should see the return period/interval (in years) for a given amount of precipitation for durations ranging from 5 minutes to 60 days. For example, if you want to see the average precipitation (in inches) for 15-minute duration of a 100-year event, you look at the table to see 1.72", or in the case of a longer incident, it may be 6 hours (6.43") or 2 days (10.8")

NWS Wind Chill Calculator and Chart:

<http://www.crh.noaa.gov/ddc/?n=windchill>

NWS Mesonet Observations

<http://www.wrh.noaa.gov/mesowest/gmap.php?zoom=7&extents=34.921971,-83.496094,40.145289,-74.377441&density=1>

VDEM Link for Up-to-Date Snow Accumulation Totals

<http://vdemgis.maps.arcgis.com/apps/Viewer/index.html?appid=bb8a18b80be54adb8a8228eb9344008f>

"Official" National Weather Service observation information for Norfolk

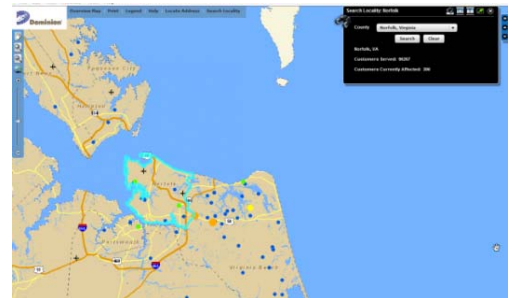
<http://www.weather.gov/climate/index.php?wfo=akq>

The list of reports received by the National Weather Service:

<http://forecast.weather.gov/product.php?site=NWS&issuedby=AKQ&product=PNS&format=CI&version=1&glossary=1>

Dominion Virginia Power Outage Map:

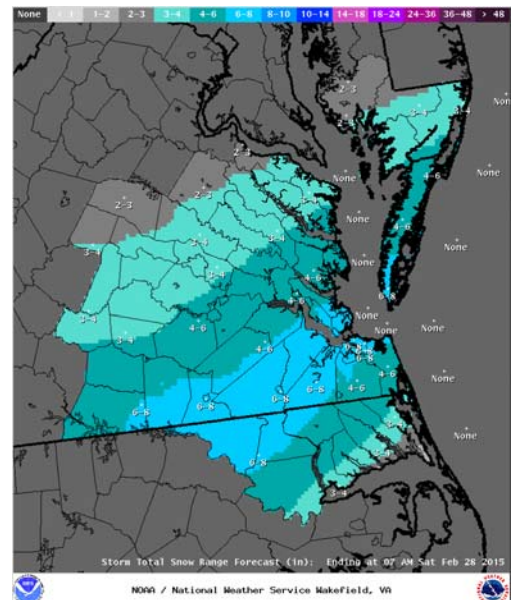
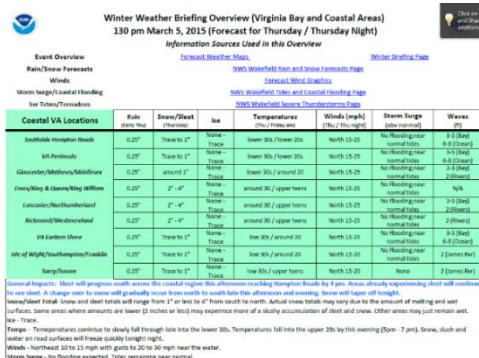
<https://www.dom.com/storm-center/hampton.jsp> or <https://www.dom.com>



Virginia 5-1-1 Road Conditions:

<http://www.511virginia.org/>

Strengths / Successes: The National Weather Service in Wakefield continues to do an outstanding job providing information updates through their online products, via conference calls through the Virginia Department of Emergency Management, regularly scheduled briefing updates, less formal email update and upon request.



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RESPONSE TO THE STORM(S)



MASS CARE AND SHELTERING

As with any incident, life safety is the first priority. With the amount of snowfall, augmented by high winds and temperatures dipping below freezing during the President's Day storm, ensuring the City's homeless population received adequate transportation and sheltering was of utmost importance. Mr. Steve Hawks, Director of Norfolk Department of Human Services, took the lead on the City side with direct support by Mr. Mike Wasserberg, Director of Norfolk's Office to End Homelessness, Ms. Sarah Fuller, Director of Norfolk Community Services Board and Dr. Michael Thornton of Norfolk Public Schools.

Norfolk Emergency Shelter Team (NEST) is a consortium of faith/community partners who provide meals and shelter to homeless single adults for overnight accommodations in the Winter. NEST is a coalition of churches who provide overnight shelter on a rotating basis. Transportation to the shelter is provided every evening from November through April, unless the sheltering location is a "walk-up site." NEST will accept most adults and separates males and females at night. NEST accommodates walk-ups only who need shelter for the night unless requested by Human Services or Office to End Homelessness. The pickup site is located at the Norfolk Department of Human Services, 741 Monticello Avenue, next to the Starke Street parking lot entrance.

NEST Shelters during the following dates:

Feb 11-17

Cornerstone Baptist
Great Bridge Presbyterian

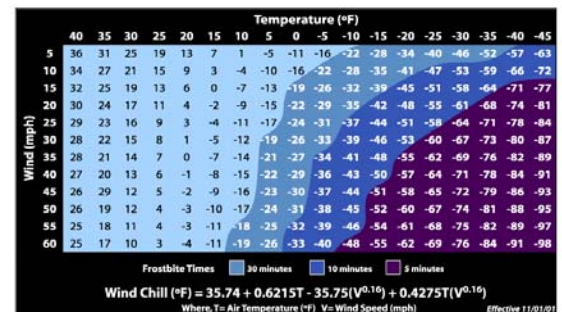
Feb 25-Mar 3

St. Andrews Episcopal
Talbot Park Baptist

NEST does not provide services to Norfolk's homeless families; however, the Union Mission does. Likewise, at times, the Union Mission *may* be able to accommodate NEST overflow.

The Salvation Army has accommodations for single males and Union Mission has accommodations for single males and females as well as families, and most homeless receive regular care from them.

**For the President's Day storm, on Monday the 16th,
wind chill was expected to reach -8 degrees.**



With no public facilities opened for the holiday, the emergency shelter plan was enacted and Maury High School opened a Warming Shelter from 7am-8pm. This shelter served over 60 individuals through the day to prepare for the next 3 days/overnights. The shelter staffed by Human Services, Community Serviced Board, Norfolk Police and School Personnel. Operation Blessing International also deployed their mobile kitchen and served several hot meals through the day. The shelter also had unexpected entertainment with high school & college basketball practices in the gymnasium which served well to take minds off the dreary weather conditions.



For Monday night, NEST shelters accommodated most in need of shelter and The Salvation Army and Union Mission provided for the rest. Tuesday and Wednesday the Salvation Army took over day shelter provision at their 19th Street location and NEST provided overnight shelter, with overflow to Salvation Army & Union Mission.

Strengths / Successes: The existence and commitment of NEST, and the houses of worship that participate in NEST, serve as an amazing and reliable foundation for assisting and protecting Norfolk's homeless population. Likewise, the solid relationships with the Salvation Army, the Union Mission and with Operation Blessing International, whose commitment to serving around the globe as well as "helping those at home" along with their talents and resources are true assets to the Norfolk community.

Strengths / Successes: There remained an effective level of constant communication and coordination of delivery of city, non-profit, and voluntary services throughout both weather incidents.

Area of Improvement

Media access in shelter:

While coordination with the media, both local and national, was considered a success, there was an instance of a media representative accessing the warming shelter, the bathroom in particular, and began capturing photos of one of the homeless shelterees changing in the bathroom stall. Once brought to the EOC's attention in the way of an online published article, a conversation ensued both internally as well as with the media organization. In both cases, the question arose as to what legal authority the City has to keep the media out of emergency shelters. Norfolk's media policy in shelters is based on the following legal opinion:

"A temporary shelter established on public property for the purposes of providing the homeless or heatless shelter from the cold is not a public forum, and therefore it is fine to deny access to it by the media.

...For First Amendment purposes, the law divides public property into three categories, the traditional public forums, designated public forums and non-forums. Traditional public forums are the streets, sidewalks and parks. In them, our ability to control expressive activity is limited. Typically, we can only regulate the time, place and manner of their use by the public – because we can't all expect our constitutional rights at the same time in the same place. Designated public forums are public properties which are not traditional public forums but which the government has opened up to some degree for the public to use for expressive activities. There are some limits on our ability to restrict access by the public to such forums once we establish them. But we don't have to establish them, and if we do, we can always return such properties to their original (non-expressive) use, thereby eliminating their status as a designated forum.

Finally, there are non-forums: properties which are not traditional public forums and which have not been opened to the public for express activities. In those spaces government entities have broad ability to regulate their use, reserving them for the purpose of which the property was intended. In this case, it is open purely to provide shelter from the cold.

[O]ne federal district court case [exists] – not in our federal circuit – holding that a government owned homeless shelter is not a public forum. In that case, a religious group was demanding access to the shelter so as to provide religious services to the homeless. The court upheld the denial of access."

To be clear, there is no interest or attempt to hide any components of shelter operations. In fact, not only is it important all aspects of disaster preparedness be transparent, it would benefit the City a great deal by being able to better communicate realistic expectations of the shelters. The focus, however, has always been on the protection of personal privacy for those in the shelter, particularly for children, those with special needs and vulnerabilities, those who are homeless (whose relatives may be unaware of their condition), undocumented persons, and those otherwise unable to advocate for themselves or want to find themselves on camera or someone's social media site.

The most "authoritative" source that exists for shelter operations and management comes from the American Red Cross, with which City shelter policies align, who maintains the following media guidelines:



- All interviews will first be approved by the shelter or service center manager.
- Staff may only give answers concerning their assignment.
- Staff may not guess at information, but will only provide facts.
- Disaster victims will not be shown on TV or interviewed without their permission.

**Interviews usually take place outside the shelter.*

Action Item: When possible, prior to the actual habitation of a shelter, coordinate a site visit with media partners so they can capture pictures and video of the layout, spaces, etc.

Action Item: Determine the interests of the media and the community, then film and post the information to Norfolk.gov

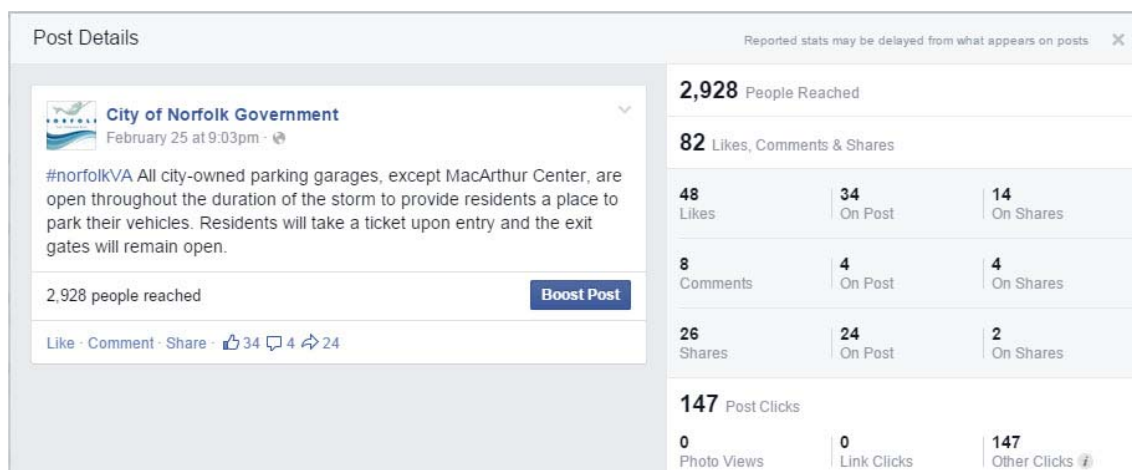
Action Item: During registration, continue to inform shelterees there is no requirement or expectation they talk to the media.

Action Item: Post signage in all shelters indicating no recording devices will be permitted, akin to that which is done for Homeless Connect.

Action Item: Encourage all to report to the shelter manager any efforts to record from within the shelter.

VEHICLES

Much the same way City-owned parking garages are opened to the community prior to a tropical storm to protect vehicles, the same was done again for these snow events. Top decks which are directly exposed to the elements can be difficult to navigate due to icy conditions; however, from February 25 at 9pm to February 27 at 5pm, all other levels were open to the public at no charge to allow their vehicles protection from the storm.



Strengths / Successes: The availability for Norfolk residents to park their vehicles in City-owned garages proved to be a popular service to the community. As seen from the Facebook posting below, 2,928 visitors saw this posting with many others “liking” or sharing. The information was also posted at Norfolk.gov and shared through Nixle, Norfolk’s alert/notification program.

Area of improvement: Add a trigger to the incident timeline to alert agencies via EOC conference call, email, Nixle and WebEOC to remove their vehicles off top deck of garages.

ROADS

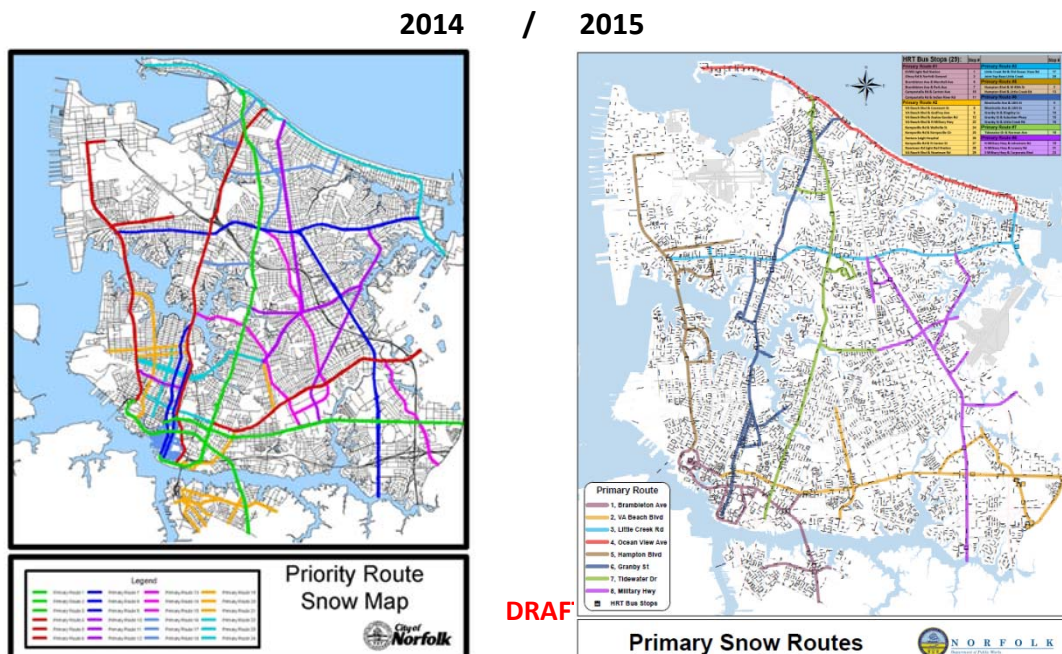
Based on lessons learned from the 2014 winter storms, much was done by Norfolk Public Works Operations Division, in close coordination with public safety agencies, Norfolk Public Schools and Hampton Roads Transit, to better align the Primary and Secondary routes and otherwise complement the needs of other critical infrastructure and resources.

The men and women of Norfolk Public Works performed tirelessly, in 12-hour shifts before, during and after the snow fall doing all they could to pre-treat roads, bridges and overpasses when feasible, and then plowing all primary and secondary lane miles once the snow reached 2” in depth.

PRIMARY ROUTES

Primary routes are those major arteries throughout the city, as well as hospital emergency room access and that of Police and Fire-Rescue facilities.

In 2014, Primary Roads consisted of 14 roads and 600 lane miles. These numbers changed to 8 routes and 352 lane miles. Additionally, the 2015 take into account school bus routes and HRT bus stops. (Route details attached as Appendix 1)





It should be noted 352 lane miles is just the beginning; it typically takes multiple sweeps to make a road “passable” or “clear.” Therefore, to plow 352 lane miles three separate times is 1,056 lane miles – the distance from Norfolk to Little Rock, Arkansas!



Any rain precipitation prior to snow will often negate or render useless any pre-treatment of the roadways. Additionally, city plows will not lower their blades until 2” of snow has accumulated.



It should also be known all priority routes are addressed at the same time. The strategy is not to complete one priority route and then another; rather, each route is assigned a crew and equipment to clear the routes as quickly, efficiently and safely as possible.

EQUIPMENT

To combat the infrequent occurrence of snow and winter storms, the city has on hand the following:



9 plow/spreader combinations
5 spreader only and 8 plow only for a total of 22 trucks
7 pick-up truck plows
5 front-end loaders
7 backhoes
Contractor Support*



Why is VDOT so much quicker to clear the highways than the local crews on City streets? VDOT does a fantastic job preparing for a winter weather event by tracking the storm, preparing their vehicles and implementing a game plan. Team Norfolk does the same! The difference is the lack of obstacles faced by VDOT crews. They can cover many more lane miles at a quicker pace because they deal with open road while local crews must contend with medians, sharp turns and traffic signals at most intersections.



Why focus on the downtown area??

There are a number of factors as to why the downtown area is considered a high priority area. Two most significant reasons pertain to safety and economic recovery. Downtown Norfolk is home to the medical campus of Children’s Hospital of the King’s Daughters (CHKD), Eastern Virginia Medical School (EVMS) and Sentara Norfolk General – the region’s only level one trauma center.

Economic recovery is also crucial to any “disaster,” and Downtown Norfolk is the economic hub for Hampton Roads. There is a significant impact for every day Downtown Norfolk is out of commission. For example, Downtown Norfolk has:

- Approximately 30,000 downtown workers
- Approximately 4,500 residents
- Almost 14,000 students at TCC
- Over 1,400 active business licenses in downtown – the revenue generated from business licenses in FY2013 was \$5.6m (value from Commissioner of the Revenue)
- Revenue generated from FY2013 Real Estate taxes - \$11.8M (value from Commissioner of the Revenue)
- FY2013 Total Retail sales - \$346.7M (value from Commissioner of the Revenue)
- FY2013 Total Assessed value of Real Estate - \$961.9M (value from Commissioner of the Revenue)

Area of Improvement: According to the Department of Public Works Snow and Ice Plan, the 2014 Winter Weather After-Action Report as well as the Team Norfolk Winter Weather Annex, Departments are responsible for the clearing of their own parking lots. This needs to be emphasized and can be accomplished by attaching snow removal equipment to existing vehicles or contract labor.

Area of Improvement: For those Departments enacting contracts to clear their lots, there should be one person in the EOC to receive all requests for contract support, keep track of which contractors, where and at what price to prevent any inefficiencies and seek every opportunity for economies of scale.

Area of Improvement: Team Norfolk partner agencies should utilize WebEOC’s Mission/Tasker board to inform Public Works operations of trouble spots. This documents the concern, as well as updates, while utilizing precious time during conference calls for other matters. Training on this capability to follow.

Winter Storm Octavia

Range of Data: All

Mission/Task

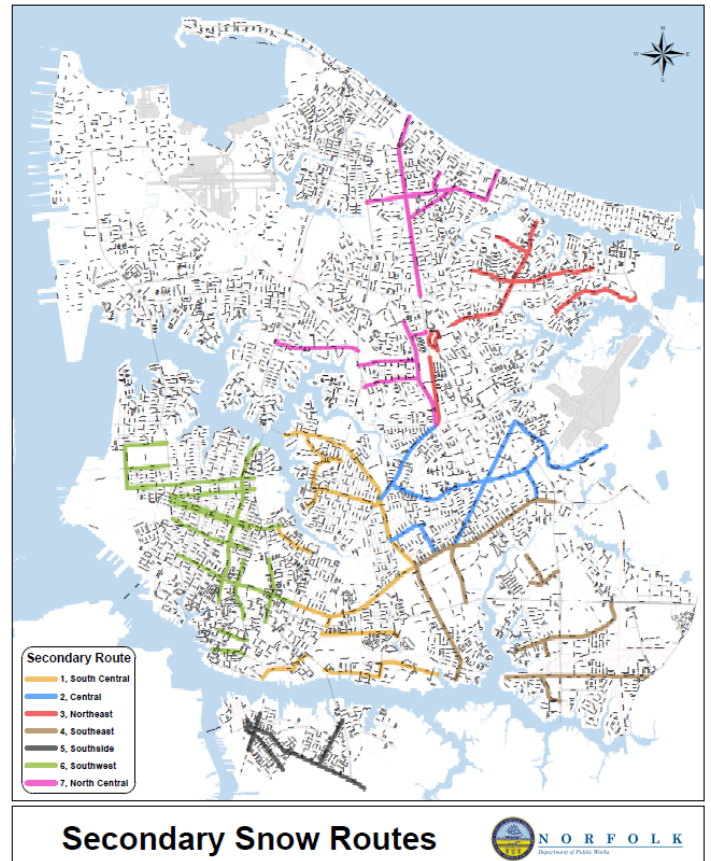
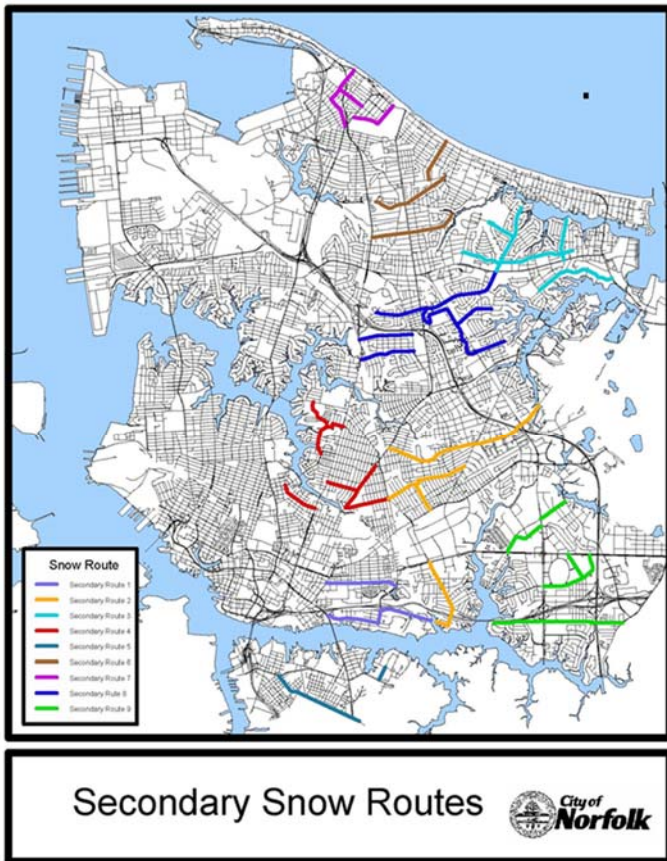
Not ReviewedUnassignedIn ProgressCompletedRejectedOverdueAllSection

Request No.	Originator/ Entry DateTime	Description/Notes	Assigned To/ DateTime	Time Due/ Completed	Status	Attachments	Update
772	LIAISON - Bon Secours DePaul Medical Center By: jredick	Desc: SNOW PLOW REQUEST Kingley Ln leading to the DePaul Hospital Emergency Room is inaccessible. Please clear when possible. Thanks!	Assigned To: DEPARTMENT - Public Works	03/16/2015 23:16:00	Accepted		Update
	03/16/2015 16:57:06						

SECONDARY ROUTES

Secondary routes are those arteries between major routes and residential roads. In 2014, nine (9) roads made up 100+ lane miles of secondary routes. In 2015, Norfolk has seven (7) routes and 182 lane miles.

2014 / 2015



Well Done!

While heading out on her 12-hour shift to plow snow off city streets on Feb 27th, Terre Ebron used her truck and a lot of determination to save the life of a woman under attack. She has worked for the City of Norfolk for more than 29 years. Job well done!!



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THE COST TO CLEAR BOTH PRIMARY AND SECONDARY ROUTES FOR BOTH STORMS:

Feb 16-23		Feb 24 – Mar 2	
Labor: Overtime	\$41,773	Labor: Overtime	\$15,127
Regular Time	\$112,800	Regular Time	\$78,469
Temporary	\$3,985	Temporary	\$3,000
Material: Sand, 575.72 Tons	\$12,079	Material: Sand, 325 Tons	\$6,826
Salt, 989.38 Tons	\$79,823	Salt, 342 Tons	\$27,583
Ice Melt, 140 Boxes	\$3,000	Ice Melt, Boxes	\$2,100
Food:	\$3,022	Food:	\$3,069
Contracted:	\$36,692	Contracted:	\$75,421 (est.)
Total Costs:	\$298,130	Total Costs:	\$216,551
Total Costs less Regular Time: \$185,330		Total Costs less Regular Time: \$183,082	

IN ADDITION TO ROAD CLEARING:

Snow removal efforts extend far beyond the road infrastructure. Access to and around various public facilities is also a must to prevent injury and the resumption of normal City operations.

Facilities to include City facility entry sidewalks and the main entrances to libraries and Recreation Centers. This involves 110 facilities for **Recreation Parks and Open Space** to address at a combined total cost of **\$97,173.84** for both storms

Note: Public Works Waste Management also assisted with snow removal in public right-of-way as well as RPOS clearing pedestrian paths to City facilities and parking lots. Any calls **NSO** received were directed to contact Operation Snow Buddy and the **inmate workforce** assisted with clearing public property around the city.

Norfolk General Services is responsible for all City parking garage areas. Total costs applied to these structures are **\$8,101.77**.



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TOTAL ESTIMATED COSTS ASSOCIATED WITH SNOW REMOVAL BETWEEN BOTH SNOW STORMS IS \$473,687.61

DAMAGES

Norfolk Public Utilities reported having repaired 41 water main breaks and responded to 298 homes for emergency water cut offs due to water service lines breaking between February 16 and March 2, 2015.

Damage elsewhere throughout the city was limited at best or went unreported. Damage assessment crews from Neighborhood Development traversed the roads conducting windshield surveys with nothing to report.



Federal Assistance?

There was a Governor's declaration of emergency so Norfolk should receive FEMA assistance, right? Not quite. While declarations of emergencies are key components of federal assistance eligibility, there are additional criterion to meet. Per FEMA Public Assistance guidance, the threshold for federal assistance for all disasters is \$3.56 per capita, based on the 2010 census. For Norfolk, with a 2010 population of **242,803**, is **\$864,379**. **Norfolk comes in at just over half that amount with \$473,687.61.**

There other key component is the storm(s) must produce a **"near record"** snowfall (i.e. within 10% of the record snowfall). According to National Weather Service, this storm not in Top 25.

Last Update: Jan 2014 * This Product will be updated on an Annual Basis																
Top 10 LIST Norfolk, VA SNOW Data																
Period of Record: 1890/91- Present Averages/Medians: based on 1949/50-2010/11																
Rank	Seasonal		OCT		NOV		DEC		JAN		FEB		MAR		APR	
	Most Snow		Most Snow		Most Snow		Most Snow		Most Snow		Most Snow		Most Snow		Most Snow	
	Season	Amt (in.)	Year	Amt (in.)	Year	Amt (in.)	Year	Amt (in.)	Year	Amt (in.)	Year	Amt (in.)	Year	Amt (in.)	Year	Amt (in.)
1	1979-80	41.9	***	***	1891	6.7	1892	18.6	1966	14.2	1989	24.4	1914	14.0	1940	1.3
2	1935-36	37.7			1950	0.6	2010	17.8	1955	13.8	1980	18.9	1980	13.7	1964	1.2
3	1892-93	33.3			1912	0.5	1935	16.2	1893	13.7	1899	14.4	1912	12.1	1989	0.5
4	1988-89	24.9			*1938	0.4	1958	14.7	1940	12.7	1948	14.2	1927	11.0	2007	0.1
5	1947-48	24.7			*1987	0.3	1917	13.9	1962	11.9	1936	13.2	1934	10.8	(several)	T
6	1917-18	24.0			1893	0.2	1896	11.0	2014	11.5	1979	12.7	1947	9.5		
7	1939-40	22.9			*1947	0.1	1942	7.7	1965	10.6	1996	11.0	1960	7.9		
8	2010-11	21.8			(several)	T	1904	6.5	1939	9.4	1895	10.8	1974	7.5		
9	1913-14	21.7					2004	5.5	1980	9.3	1904	10.2	1926	6.9		
10	1911-12	21.3					1962	4.5	*1973	9.1	1937	9.8	1910	6.0		
AVG	7.0"		0.0"		T		0.8"		2.7"		2.4"		0.7"		T	
Med	5.1"		0.0"		0.0"		T		1.0"		0.8"		T		0.0"	

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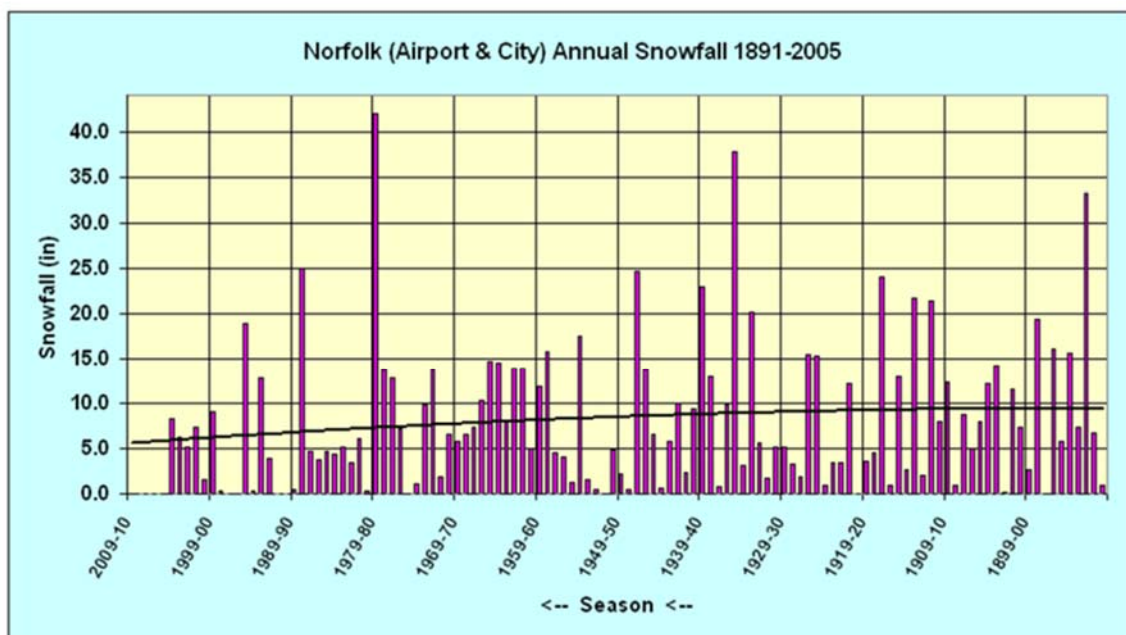


With the Higher Frequency of Winter Weather, the Number of Lane Miles, and the Cost for Contract Labor, Do We Need To Invest In More Equipment?

For years there has been a responsible balance between that which Norfolk has been willing to accept as risk and what is appropriate be maintained (and taxed and budgeted) in response. For such an infrequent occurrence, it has been fiscally responsible to either accept the time it takes for the available equipment to clear the primary and secondary routes, and/or enlist contractor support.

According to the National Climate Data Center (NCDC), the Southside Hampton Roads region has experienced 28 significant winter storm events including snow and ice storms, extreme cold, and freezing rain since 1993. These events account for \$20,120,000 in property damages for the affected areas. The region received presidential disaster declarations from major winter storms in 1996 (the Blizzard of '96) and 2000.

As indicated in the Southside Hampton Roads Hazard Mitigation Plan, the annual probability of Norfolk receiving measureable snowfall is 89.8% (p. 4:84, Table 4.15).



Source: http://www.erh.noaa.gov/akq/climate/special/graphs/hs_ORF.html

Area of Improvement: The resulting question remains is the whether the winter weather Norfolk is experiencing is part of a natural cycle? Or a change in the climate? An informed conversation is necessary to better determine the expected frequency, the timeline by which primary and alternate routes can be cleared, the expectations of when they “should” cleared, and with the available pieces of equipment.



Based on discussions with the National Weather Service: This is difficult since there is generally no single readily predictable factor that one point to for assessing the potential of future winter snowfall. Some may remember the 1979-80 winter, which is the all-time seasonal max snowfall in winter. In fact, most winters between 1950 and 1980 were snowier and colder than the long term normal. Subsequent winters have generally been highly variable when it comes to snowfall, as were winters for the 30-40 year period prior to 1950. All that said, there is no way to accurately predict what next winter will bring with regard to storminess and winter...Unfortunately, the declaration cannot be made whether the region is in a snowier/colder winter pattern at this point.

Along with a discussion on climate and forecasts, there should also be a chart comparison among other like-localities such as Richmond, Va. Beach, Newport News, Hampton, and perhaps Durham, NC focused on equipment enhancements. Such a chart should illustrate the number of facilities as well as lane miles with a listing of equipment.

With all information presented, the ultimate discussion will need to be about community expectations and the willingness to pay (or not) for equipment enhancements (purchased or leases- whatever most cost effective) will a critical element of Norfolk's strategy moving forward.

DIGGING OUT OF THE SNOW: OPERATION BLESSING "SNOW BUDDY PROGRAM"

In its second year, Team Norfolk's "Snow Buddy" program, coordinated by Operation Blessing was able to help more residents in Norfolk dig out of the snow.

By establishing two hotlines: one for those requesting help and another for those offering help, and working with the City to advertise by all available means, Operation Blessing coordinated and processed all work orders out of the Lowe's parking lot at 1081 N. Military Highway, equipment and available volunteers to achieve the mission.

During the first winter storm event, 119 residents were helped through the program!

Then again during the second winter weather event which saw warmer temperatures and a greater overall willingness for neighbors to help neighbors on their own, 75 more work orders were completed.



OPERATION BLESSING
DISASTER RELIEF SERVICES
Because We Care
www.ob.org



Need Help or Want To Help? RESIDENTS WHO NEED HELP

Starting Thursday, February 26:* If you need assistance with shoveling snow from your home, driveway and/or residential area and do not have the resources to accomplish this yourself, we can provide volunteer assistance. **Please either call us at: 757-274.8650 or come in person to fill out a Work Request for FREE volunteer help at the location below:

"LOWE'S PARKING LOT"

Located at 1081 N Military Hwy, Norfolk
"All residents need to either come "in person" to complete a Work Request and sign a release/right of entry or MAKE SURE you are home when the volunteers arrive to sign the Work Request form giving the teams permission to be on your property. We will not be able to do any work without a form SIGNED BY THE HOME OWNER. Priority will be given based on elderly, sick, disabled, single-moms, etc; and will be based on the availability of volunteers.

Need Help / Work Order Request: 757.274.8650

WANT TO HELP? VOLUNTEERS

Meet in front of the Operation Blessing Mobile Command Center @ 8:30 AM or 1:30 PM
At Lowe's on Military Hwy (Until the Snow Melts)
Volunteer Phone: 757-374-0944

LOWE'S PARKING LOT:

Located at 1081 N. Military Highway * Norfolk, VA
VOLUNTEERS, PLEASE BRING SNOW SHOVELS IF YOU HAVE THEM - if not we will provide them.



Operation Blessing's expertise in coordinating such an initiative – and the equipment they generously provided in terms of shovels, salt and other resources - helped a great number of individuals who otherwise would have been homebound due to the elements.

The program become so popular is received nearly 5,100 "Likes" on Facebook!

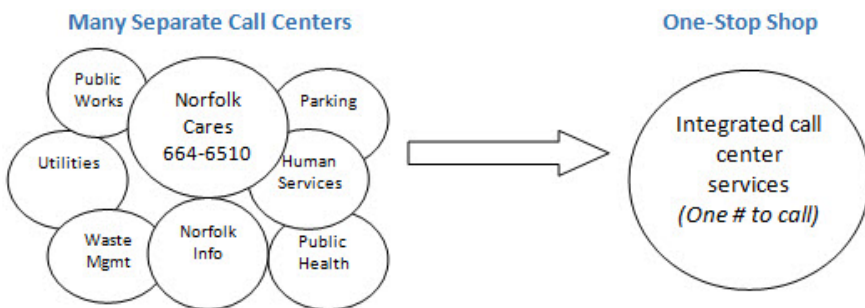


PUBLIC INFORMATION

It is crucial Team Norfolk communicates with the community before, during and after an incident by providing timely, accurate and actionable information. Moreover, communication of realistic expectations is crucial for businesses and homeowners to better understand the situation and otherwise make critical decisions. There are many ways Team Norfolk works to achieve this mission.

NORFOLK CARES IMPACT CENTER (664-6510)

IMPACT exists to serve as the one telephone number for the community to call for any questions about city services. In the past, the IMPACT number was advertised year around until an actual incident occurred – then a different number was communicated for incident-related question. This was resolved and IMPACT is there for the community year around – during blue skies as well as emergencies.



During the storm of President's Day/week, the IMPACT center received 2,228 weather-related telephone calls, 48 emails, 37 iPhone requests, 16 voicemails and 68 online requests = 2,397 inquiries / requests. The second storm produced nothing being the normal call volume.

Top 5 Calls Related to Snow Storm:

1. Will Waste Management pick up my trash tomorrow?
2. When will make-up trash collection occur?
3. When will my recycling be collected?
4. What are the Courts hours of operation?
5. Parking-related issues (metered parking/on-street parking/garages)

Strengths / Successes: A lesson learned from the 2014 winter storms was to include Norfolk IMPACT on all EOC briefings / conference calls. This was achieved during these 2015 storms and paid off. IMPACT Manager, Halima Arias, was able to provide the types and patterns of calls the Center was receiving, and likewise, the EOC could provide information for her team to relay to callers.



Who is Responsible for Sidewalk Curb Cuts?

One concern received in the IMPACT Center during the most recent event was the issue of snow being plowed from the streets blocking the sidewalk curb cuts, thus disallowing those reliant on a wheelchair for mobility access to where they then need to go. Norfolk strives to be a healthy, safe, and inclusive community; therefore, there are two items in place to help alleviate this concern.

1. **Norfolk City Code Sec. 42-34: Removal of snow from sidewalks** states:
By owners or occupants of abutting property. It shall be the duty of every person using or occupying, in any manner or for any purpose whatsoever, any house, store, shop, building or tenement of any kind, and of persons having charge of churches and public buildings of any description, other than public schools and buildings owned or occupied by the city, and of owners of unoccupied houses or unimproved lots, situate on any paved street, lane or alley in the city, within three (3) hours after the fall of any snow has ceased, to remove and clear away, or cause to be removed and cleared away, the snow from the sidewalks fronting such house, store, shop, church, building or lot, in such manner as not to obstruct the passage of the water in the gutters. If snow ceases to fall between the hours of 3:00 p.m. and 7:00 a.m., the removal of the snow before 11:00 a.m. will be deemed compliance with this section. (Code 1958, § 45-30) State law reference - Authority for above section, Code of Virginia, § 15.1-867.
<http://norfolk.gov/DocumentCenter/View/1363>

2. Operation Blessing "Snow Buddy" Program.

Operation Blessing partners with the Cities of Norfolk, Chesapeake and Virginia Beach in helping those who need a little help digging out of their homes to attend appointments, etc. (see page ____.) OBI establishes a hotline for those requesting assistance and coordinates available volunteers to assist. Work order priority is given to those with access needs, elderly and have special needs with snow removal, so they can make it out of their homes to places like cancer or dialysis treatments, pharmacies, grocery stores, etc.

Note: This particular request for assistance was received after the Snow Buddy program was completed. Kudos to the Downtown Norfolk Council ambassadors and clean team crews for stepping up and assisting the individual in need!

JOINT INFORMATION CENTER (JIC) / UNIFIED MESSAGING

Team Norfolk consists of many agencies and organizations, and as such, many message points. It is critical to not only meet and share these messages among the Team, but to unify them in one consistent package for the community. While the JIC was not fully activated for these winter events, Public Relations and communication professionals were included in the response messaging was a regular topic for all EOC briefings / conference calls. With the information received, messaging went out from the Norfolk EOC using the following tools:



CITY WEBSITE: Norfolk.gov

All information available during the two incidents were posted to Norfolk.gov. This includes information posted to the Emergency Alert Bar, Current Topics section of the site, the News Flash feature as well as as well as accessible .pdf documents. Examples include the following posts:

Trash Make-up Day Saturday

Thursday trash and recycling collection customers should put their trash and recycling containers out for pick-up Saturday, Feb. 28.

Roads

In spite of the cold temperatures last night, Public Works crews were able to plow all night and morning on secondary routes. Today's crews will focus on finishing the secondary routes and improving anything left on the primary routes to include turn-lanes, intersections, and widening to the curbs. Warmer temperatures and sun are expediting melting this week, as opposed to last week. Drivers are urged to use caution and expect refreezing of wet patches overnight. Info on primary and secondary snow removal routes www.norfolk.gov/snowremoval | [Photos](#) Similar to other localities, crews will not plow residential streets.

Sign Up for NIXLE

A subscription e-mail and text alert service for residents when storms or other emergencies disrupt normal city operations or pose significant danger to life or property. [Sign Up](#)



Thursday, February 26 Update

Public Works crews continue round-the-clock shifts to plow primary roadways across the city. Most roadways are clear to asphalt however areas of slush remain. Overnight crews will begin to work on secondary roadways. Drivers are asked to use caution as wet roadways will freeze overnight and avoid plow trucks. For information on Norfolk primary and secondary snow removal routes, go to www.norfolk.gov/snowremoval Similar to other localities, crews will not plow residential streets. [Photos](#)

City of Norfolk Trash/Recycling Updates

Trash and recycling collection resumes tomorrow **Friday February 27** for regularly scheduled customers Thursday trash/recycling collection customers are rescheduled for pickup **Saturday, February 28**

City Operations:

Thursday, Feb. 26 - All city offices, libraries, recreation centers are closed. General District, Circuit and Juvenile & Domestic Relations Courts are closed.

Friday, Feb. 27 - City offices, libraries and recreation centers will open at 10 am. Recreation centers with 2:30 pm operating

- DRAFT

SOCIAL MEDIA:

In addition to Norfolk.gov, information was also posted to Norfolk’s Facebook and Twitter social media sites for more real-time situational awareness, and to solicit questions from the community.



New Twitter Followers: 98



Facebook “Likes” Increase of 78

**Most update posts averaged about 1500 views per post
44,800 impressions in 5 day period 2/23-2/27**



Nixle is currently the City’s alert / notification system used to communicate public safety-related information during normal day-to-day operations, and then emergency-specific information during an emergency of disaster situation.

19 Nixle messages sent to subscribers echoing information about weather advisories, closures, waste collection and all other information posted online and to social media.



Everbridge has recently purchased Nixle and will offer the same capabilities and more. This enhancement will allow Team Norfolk to better communicate with the community during times of hazards, and allow the community to better control for what information they would like to be contacted. Additionally, this product may allow for the consolidation of multiple systems thus resulting in significant savings.





TV-48 Norfolk's Neighborhood Network (NNN)

It is understood not all residents have computers or mobile devices; therefore, using the civic plus BLOG module, Norfolk ComTech was able to fashion an automatic crawl on NNN that allows for updates at the same time as information goes on the web, Facebook or is available in the call center. Below is an example of a crawl that went out during the storm. And the photo shows a crawl as it appears below the live stream.

CRAWL...



Information about snow removal routes. In the event of a snow storm that leaves accumulation, the Department of Public Works Field Operations division will begin clearing snow from streets according to the Primary Snow Removal Routes and Secondary Snow Removal Routes. The department recently revised its route maps to allow for greater concentration on the most heavily used routes. These incorporate all the bridges and overpasses and also include HRT's snow bus route. Primary routes also include medical and emergency facility access. Secondary routes include many commercial thorough fares and main roads around ODU, NSU, and Norfolk Public Schools.

Crews do not plow residential roads due to the size of our equipment and safety concerns. As such, please exercise extreme caution when operating on these roads in snow and ice conditions. The maps are available at www.norfolk.gov under public works.

Strengths / Successes: The process worked and will be updated the City's Crisis Communication Plan.

Strengths / Successes: There was a unity of message throughout Team Norfolk and the Community

Area of Improvement: Currently there are 2,775 Nixle subscribers contacts in Nixle, to include 2,561 who will receive SMS text messages and 1,194 emails. Efforts must be made to increase this number and thus, increase opportunities for greater situational awareness throughout the community.

Area of Improvement: How to communicate status of the roads?

This was a discussion point in the past and brought up again by Councilman Smiegel during Council's information session February 24. In an effort to establish a strategy, a meeting was conducted on Wednesday, March 4th, 2015 among Emergency Preparedness and Response, Public Works, Communications, ComTech to include the IMPACT Cares Call Center and GIS as well as a

representative from Intermedix (WebEOC). There was agreement among the group information was key to, and expected by, the community. It is necessary to communicate how and when the roads are being addressed and what state they are in (i.e. cleared, passable or impassible). Likewise, if information is not shared, the assumption will be nothing is being done.

There was also agreement among the group technology existed in the City which could be leveraged to document and communicate road status information. What was needed was the process, choosing the right tool, and making it work. The two tools which can serve to achieve the mission is Norfolk's STORM program and Norfolk's WebEOC. Both are database programs and both can push information to iVIEW, which is the mapping tool accessible to the community via the Norfolk.gov homepage during emergencies.

Currently, the process to update road statuses has been every six hours, in time for Team Norfolk conference calls. However, moving forward, route sections, once "addressed" will be radioed to Public Works dispatch who will update a board to be developed in WebEOC. Starting with the assumption that all roads are impassable, once the information is received, the Public Works Operations administrator will update the board in WebEOC by choosing fields from pull-down menus to include the specific route, length of road (automatically reflected for that route), time(s) plowed, and most recent status (Impassable, Passable or Clear). iVIEW will then ping WebEOC every ____ minutes and reflect a more real-time status, by color, in iVIEW. Note: there will be a disclaimer stating road statuses are the best, most recent snapshot at that time and, like the conditions, are subject to change. Furthermore, the Public Works Operations administrator should have a narrative section for each route to add any additional comments for the viewer.

Immediate action items: 1.) Bruce Ellis of Intermedix / WebEOC will send Norfolk road closure boards used and proven as best practice elsewhere throughout the nation. 2.) There will be a re-assessment of the Primary and Secondary routes to make for a more meaningful and consolidated map for community viewers. 3.) When the technology is in place, training will begin among the appropriate agencies along with communication to the community.

Note: Notes to be included on the site so site visitors can see the last time crews were on a particular route section, despite it being labeled impassible. (It typically takes more than one or two trips to clear a road. Put in context, there are 352 lane miles of primary roads. Multiply this number by the times it takes to go from impassible to passible to clear and the result will be over 1,000 lane miles of primary routes.

NEXT STEPS...

Consistent with the Department of Homeland Security Exercise and Evaluation Program (HSEEP), an improvement plan is necessary to correct those deficiencies identified in this after action report. In other words, more than identify issues, it is critical to act on them to avoid inefficiencies in the future.

Team Norfolk Emergency Operations exists to address and ultimately strengthen the community's plans and overall preparedness. Issues will be discussed during its monthly meetings, and when necessary, specific Emergency Support Function meetings will be conducted to remedy those items requiring more detail and attention.

A status report will be provided within six months and included as an addendum to this report.